AMENDMENTS TO THE CLAIMS

Please amend claims 1, 3, 4, 10, 15-17 and 19 as follows.

1. (Currently Amended): A probe card for testing an integrated circuit, the probe card comprising:

a head plate having an opening;

a plurality of rectangular beam assemblies mounted to the head plate and disposed across the opening of the head plate, wherein each of the plurality of beam assemblies is substantially parallel;

a plurality of probe needles of substantially equal length extending through the rectangular beam assemblies, wherein each probe needle has a first end extending through one of the rectangular beam assemblies and a second end for contacting the integrated circuit; and

wherein each of the rectangular beam assemblies comprises:

a support beam removably mounted to the head plate; and

a probe guide mounted to the support beam, wherein the first end of each probe needle extends through the probe guide.

2. (Cancelled)

3. (Currently Amended) The probe card of claim ~~2~~ 1, wherein the support beam comprises a steel beam.

4. (Currently Amended) The probe card of claim ~~2~~ 1, wherein the probe guide has a plurality of pre-drilled through-holes for receiving the first end of each probe needle.

5. (Original) The probe card of claim 1, wherein the probe needles comprise cantilever probe needles.

6. (Previously Amended) The probe card of claim 1, wherein each of the rectangular beam assemblies has a probe needle pitch of less than approximately 100 microns.

7. (Cancelled)

8. (Previously Amended) The probe card of claim 1, wherein the plurality of probe needles are disposed in a high density array and wherein each probe needle comprises a cantilever mounted pin.

9. (Previously Amended) The probe card of claim 8, wherein each rectangular beam assembly has approximately 800 – 2500 probe needles.

10. (Currently Amended) A probe card assembly for providing temporary electrical connections to an integrated circuit, the probe card assembly comprising:

a sub-structure; and

a probe card comprising:

a head plate removably mounted to the sub-structure, wherein the head plate has an opening and is a separate component from the sub-structure;

a plurality of rectangular beam assemblies mounted to the head plate and disposed across the opening of the head plate, wherein each of the plurality of rectangular beam assemblies is substantially parallel and comprises a support beam removably mounted to the head plate and a probe guide mounted to the support beam; and

a plurality of probe needles <u>of substantially equal length</u> extending through the rectangular beam assemblies.

11. (Cancelled)

12. (Original) The probe card assembly of claim 10, wherein the sub-structure is a printed circuit board .

13. (Previously Amended) The probe card assembly of claim 12, wherein each probe needle has a first end and a second end, wherein the first end extends through one of the rectangular beam assemblies for contacting the printed circuit board and the second end contacts the integrated circuit.

14. (Original) The probe card assembly of claim 13, wherein the second end forms a solderless contact with the integrated circuit.

15. (Currently Amended) A system for simultaneous testing of a plurality of devices, the system comprising:

a probe card assembly comprising:

a sub-structure;

a head plate removably mounted to the sub-structure, wherein the head plate has an opening and is a separate component from the sub-structure; and

a plurality of rectangular beam assemblies mounted to the head plate and disposed across the opening of the head plate wherein each of the plurality of rectangular beam assemblies is substantially parallel, each rectangular beam assembly comprising:

a support beam; and

a probe guide mounted to the support beam; and

a plurality of cantilever probe needles <u>of substantially equal length</u> extending through the probe guide;

an automatic test equipment for receiving and analyzing electrical signals from the probe card assembly; and

an interface assembly for connecting the automatic test equipment to the probe card assembly.

16. (Currently Amended) A method of manufacturing a probe card comprising the steps of:

(a) providing a head plate having an opening;

(b) providing a plurality of probe ~~needle~~ needles of substantially equal length, each probe needle having a first end and a second end;

(c) inserting each ~~the~~ probe needle through a rectangular beam assembly, such that the first end of each ~~the~~ probe needle extends through the rectangular beam assembly; and

(d) mounting the rectangular beam assembly on the head plate such that the rectangular beam assembly is disposed across the opening of the head plate; and

(e) repeating the mounting step for a plurality of rectangular beam assemblies, wherein the rectangular beam assemblies are configured substantially parallel to each other.

17. (Currently Amended) The method of claim 16, wherein the step of inserting comprises inserting ~~the~~ each probe needle through a probe guide, such that the first end of ~~the~~ each probe needle extends through the probe guide; and further comprising the step of mounting the probe guide to a support beam, such that one of the rectangular beam assemblies is formed.

18. (Original) The method of claim 17, further comprising the step of drilling a through-hole into the probe guide, wherein the through-hole is for receiving the first end of the probe needle.

19. (Currently amended) The method of claim 16, wherein ~~the~~ each probe needle comprises a cantilever probe needle.

20. (Cancelled)